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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,544	11/10/2003	Kathrin Berkner	074451.P159	5145
8791 7590 02/06/2008 BLAKELY SOKOLOFF TAYLOR & ZAFMAN 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER BAYAT, ALI	
			ART UNIT 2624	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/705,544

**Applicant(s)**

BERKNER ET AL.

**Examiner**

Ali Bayat

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 28-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/11/07; 6/15/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Election/Restrictions**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-27, drawn to image storage or retrieval, classified in class 382, subclass 305.

II. Claims 28-64, drawn to template matching (determining both similarities and differences, classified in class 382, and subclass 219.

The inventions are distinct, each from the other because of the following reasons:

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

During a telephone conversation with Michael J. Mallie on 1/30/08 a provisional election was made without traverse to prosecute the invention of image storage or retrieval, claims 1-27. Affirmation of this election must be made by applicant in replying to this Office action. Claims 28-64 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in

the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the numbering in Fig.8 is missing. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### **Claim Rejections - 35 USC § 101**

3. A.) 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

The claimed (15-26 and 39-49) "article of manufacture" is broad enough to encompass two distinct disclosed embodiments: 1. the "computer readable media" as described at specification para.37, and the "machine readable media" as describe4d at specification Para. 39. The examples provided by the specification of a computer readable medium are all statutory, while the examples of the machine readable media are non-statutory (i.e., "signals"). Therefore, the claim as currently recited covers non-statutory subject matter. The examiner suggests amending the preamble (claims 15 and 39) to replace the "article of manufacture" with "computer readable media" in order to encompass only the statutory embodiments and their equivalents.

Claims 15-26 and 39-49 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 15 and 39 define a [article of manufacture having one or more recordable media storing instructions thereon which, when executed by a system, cause the system to perform a method comprising] with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a signal/carrier wave embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

### **Claim Rejections - 35 USC § 101**

B ) 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 15-26 and 39-49 is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 15 and 39 defines a [article of manufacture having one or more recordable media storing instructions thereon which, when executed by a system, cause the system to perform a method comprising] embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed [article of manufacture having one or more recordable media storing instructions thereon which, when executed by a system, cause the system to perform a method comprising] can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

The examiner suggests amending the preamble of claims 15 and 39 to replace the "article of manufacture" with "computer readable media" in order to encompass only the statutory embodiments and their equivalents. Examiner suggestion "Computer readable media having one or more recordable media

storing instructions thereon which, when executed by a system, cause the system to perform a method comprising”.

### **Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekiguchi et al. (Pub.No: US 2001/0004739 A1).

In regard to claim 1, Sekiguchi provides for accessing header data ( Fig.2 element 3, which corresponds to step 7 of Fig.6, last part of para.100-first part of para.101) from a multi-resolution codestream of compressed data of a first image ( Fig.2 element 2 para.78, also step 7 of Fig.6, last part of para.100-first part of para.101); deriving one or more retrieval attributes from the header information ( Fig.2 elements 3 and 6 para. 79, also Fig.6 step 7, see last part of para.100-first part of para.101) ; and performing image analysis ( Fig.2 element 10 para.79) between the first image and a second image ( Fig.2 element 9 para.79 see user interface unit for selecting an image which is desired to be retrieved) based on the one or more retrieval attributes.

In regard to claims 2 and 16 Sekiguchi provides for the header information comprises the number of bits per codeblock ( para.101, see pixels values

extracted for each macro-block in step 8 of Fig.6)

In regard to claims 3 and 17 Sekiguchi provides for the multi-resolution codestream complies with the JPEG 2000 Standard ( para.129).

In regard to claims 4 and 18 Sekiguchi provides for the image analysis comprises similarity matching (Fig.12 step 26, para.110).

In regard to claim 5, Sekiguchi provides for the image analysis comprises clustering (para.165, see meta-data attached corresponds to clustering).

In regard to claim 6, Sekiguchi provides for the image analysis comprises categorization (Fig.6 steps 7 and 12 categorization the frames, para.101).

In regard to claims 7 and 19 Sekiguchi provides for deriving one or more, retrieval attributes comprises creating a first vector of the one or more retrieval attributes (para.101, Fig.6 step 13, see motion vector extracted in video segment, which produces characteristic descriptor set, which corresponds to element 3 of Fig.2) , and performing image analysis comprises comparing the first vector with a second vector of one or more retrieval attributes associated with a second image ( Fig.2 element 10, para.79).

In regard to claim 8, Sekiguchi provides for performing retrieval of the second image based on-a result of image analysis( Fig.2 element 9 para.79 see user interface unit for selecting an image which is desired to be retrieved( Fig.2 element 10)

In regard to claims 9 and 26 Sekiguchi provides for the one or more retrieval attributes comprise one or more resolution-sensitive features ( Fig.3 step 4,



Para.95, note extraction of luminance and color difference and motion vector, correspond to resolution-sensitive features).

In regard to claims 10 and 22 see the rejection of claim 1. They recite similar limitations as claim 1. Hence they are similarly analyzed and rejected.

In regard to claims 11 and 23 Sekiguchi provides for the first image comprises a scanned compound document. (Fig.6 step 8, see "n" for poison of raster scan).

In regard to claims 12 and 24 Sekiguchi provides for deriving the one or more retrieval attributes comprises computing the one or more retrieval attributes (Fig.2 element 10, para.79).

In regard to claims 13-14 and 25 Sekiguchi provides for the code stream includes a plurality of layers (luminescence layer, a chrominance layer, and a layer for the remaining bits) of coded data and where accessing the header data comprises accessing header data connected with one of the layers( Para.95 lines 1-5).

In regard to claims 20-21 and 27, see the rejection of claim 1. They recite similar limitations as claim 1. Hence it is similarly analyzed and rejected.

In regard to claim 15, see the rejection of claim 1. It recites similar limitations as claim 15. Except for computer readable (Fig.2 see server). Hence it is similarly analyzed and rejected.

#### **Contact Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Bayat whose telephone number is 571-272-7444. The examiner can normally be reached on M-F 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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